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IMPROVED METHOD OF EXAMINATION OF THE EAR.

BY DR. A. YOUNG, JR., FARMINGTON, ME.

[Communicated for the Boston Medical and Surgical Journal.]

HAVING had considerable experience in aural affections, and well knowing the absolute necessity of accuracy of diagnosis, to arrive at which requires, aside from the subjective symptoms, a thorough knowledge of the physical signs presented, I am induced to briefly record what I conceive to be a *new method*, and when once brought into vogue by aural surgeons they will not only improve the facilities now afforded, but consider the *light* as practically "extended."

None of the authors whom I have consulted, and among them the best and most recent publications—Wilde, Pilcher and Kramer, make mention of the use of reflected *sun* light; and as simple as the means thus afforded, no practical aurist, after a single trial, will adopt any other in the use of direct sunlight.

The common method, as detailed by authors, borrowing an extract from Wilde, is to have "the patient seated beneath the examiner, with the head slightly bent, opposite a window *through which the sun is shining* at the moment, and, if possible, between the hours of eleven and three."

Now my method is available *when the sun shines*, between *sun-rise and sun-set*, by means of the following simple apparatus:—To a foot, or base board, about 8 inches square, is attached a rod 2 feet in length, bearing a sliding ring with a thumb screw, and an armature 12 inches long, having at the end a ball-and-socket joint with a thumb screw, and another short armature to hold a mirror six inches square.

To use the instrument (would not *Solar-scope* be an appropriate name?) raise the lower sash of the window, and place it upon the sill, and rest the beam of the sash upon the top of the rod. Swing the armature out of the window, and by means of the thumb screws adjust the mirror to direct the rays of the sun into any part of the room you please.*

* This contrivance has long been used in Boston, by Dr. CLARK, for the purpose of directing the sun's rays upon the ear.—EDITORS.

With such an instrument, the patient can have a stream of beautiful, clear light playing upon the auricle and *within the meatus*, with the head erect; and the examiner may be seated by his side, and with the aid of his speculum make as complete examination as desirable, and all of this without the inconvenience of a heated head and dazzling sun rays.

Now that cold weather has come, I content myself by setting the *Solar-scope* upon a table, close to the window, and direct the rays of the sun, as in the former case, to any part of the room; or having first seated my patient, direct the rays immediately upon the auricle. The distance at which the patient may be seated from the instrument, may be a few feet or twenty, although ten feet is about right.

Those who know the difficulties attending some operations within the meatus and on the membrana tympani, such as removing polypi or any extraneous bodies, as well as a thorough explanation of the parts, cannot but appreciate this invention, as it is certainly *new*, in aural surgery. The same may be used also for more complete explorations within the vagina, rectum and throat, and nasal fossa—and, as such, will be found a valuable acquisition in the procurement of a bright light.

With one other improvement upon the *Speculum auris*, I close this article. The thing was suggested by a more determined effort to ascertain the true cause of a slight inflammation as well as a peculiar itching sensation on the membrana tympani of a patient, without any tinnitus or loss of hearing. The naked eye, in the best light, could discover nothing but the slightest vascularity of the membrane at the point of the malleus. On the application of a two-and-a-half inch focal magnifier, a small hair was found and removed, which the naked eye alone could not see, and by the removal of which, the symptoms immediately ceased.

Hence, springs up what I shall call the *Speculum-scope* (name suggested, however), and by means of which I conceive that a good thing has been found at last, which, indeed, may be, by longer and larger glasses, adapted to other speculums. Mine is a *forceps speculum*, with an attachment on its left handle of a two-and-a-half inch focal magnifying glass, which is about the true distance from the external opening of the speculum to the membrana tympani—after it is adjusted to the meatus. Some eyes, however, may require a larger or shorter focal glass. The lens may be thrown over the external opening of the speculum, when required.

I use the *Speculum-scope* in the following manner:—Having seated my patient in a chair, with the ear facing the *Solar-scope*, a stream of light is reflected upon the auricle. Seated in a chair beside the patient, the *Speculum-scope* is introduced into the meatus, and as soon as a good view is had, with the right index finger move the magnifier over the opening of the *Speculum*. The meatus is several times enlarged, and the beautiful mechanism of

the membrana tympani is viewed with all its lesions and deformities.

With the above two excellent instruments, I have examined nearly two hundred patients within the last six months, and I am satisfied that after they have been fully tried, they will take the precedence of all others—or at least be found so indispensable that no aurist will do without them.

Bath, Me., Nov. 14, 1859.

RESEARCHES UPON THE ERECTILE ORGANS OF THE FEMALE,
AND UPON THE TUBO-OVARIAN MUSCULAR APPARATUS, &c.

[Continued from page 276.]

By bringing these branches of pretended helicine arteries, however, into the field of the microscope, it was at once possible, with a power of 30 diameters, to make out traces of rupture at the extremities of the majority of them, and, by lightly compressing them, to cause little drops of the injection to exude. Wherever compression did not bring about this result, I have always found, instead of a diverticulum terminating in a cul-de-sac, a vessel twisted upon itself in the form of a loop. As to the arterial dilatations, terminating abruptly in a very minute vessel, an arrangement which Kölliker instances as the type of helicine arteries and a general fact, I have encountered them, as did Müller, occasionally only, and in that case I have simply found that in some instances a little branch detached itself from the convexity of the vascular loop, but much more frequently it appeared to be accidentally caused by an incomplete injection. Where, as may be observed in the figure of Kölliker, a fine vascular thread occupies the centre of a trabecule, relatively very large, it is sufficient to compress the dilatation to see the injection distend the pretended trabecule and transform it into a vessel equal in dimension to that of the diverticulum itself. In those instances which have served as the basis of these descriptions, the substance injected did not fill the vessel entirely, but occupied the centre only, and wherever it stopped, it ended in a filament of extreme tenuity. By rendering the sheaths described and figured by Müller, the thickness of which also often exceeds that of the vessel itself, transparent with acetic acid, I have, by means of magnifiers of 200 diameters, determined beyond question that they are nothing else than the walls of the artery itself, strengthened by an additional coat; but at the same time the cylinder of matter injected is far from corresponding in its dimensions to the calibre indicated by the annular fibres of the middle coat of the vessel. In one instance of this sort, the whole diameter of the artery invested with its pretended sheath was 0^{mm} 13; the cylinder of the injection occupied only 0^{mm} 03 of the

calibre of the artery, which measured $0^{\text{mm}} 08$, the thickness of the true sheath or additional coat being only $0^{\text{mm}} 025$.

So also these pretended helicine arteries of $0^{\text{mm}} 2$ and under, are not enveloped in a sheath peculiar to them, as Müller contends; they have those coats only, which, in all organs, normally belong to arteries of their dimensions, and are unconfined in the midst of the large sinuses of the central portion of the corpora cavernosa and the bulb of the urethra. It is important to state that the diverticuli, more or less convoluted, show themselves among the branches in very variable order and dimensions; they are the more attenuated and farther from the central artery, in proportion as the injection has run better, and more care has been bestowed on the preparation. But it is always at the surface of cuts or rents that we find the tufts of helicine arteries. In fresh pieces we perceive, in the cavity of the areolar spaces, that their removal of the surface has subjected to mechanical violence the arteries which traverse them and describe curves, but do not show any free extremity. If we tear the tissue of the trabecules, made transparent by the action of acetic acid or an alkali, or better still by drying, or best of all by means of glycerine, we can see the whole course of the deep-seated arteries, and arrive at the conviction that they nowhere have the appearance of glove-finger-like diverticuli, but only of divisions into multiplied convolutions, up to the very moment when they penetrate through the thickness of the muscular trabecules in order to open immediately after at their surface in the cavernous sinuses. Hyrtl pretends to have seen in the erectile organ of the head and neck of the turkey, arteries which terminated at the surface by dilatations into culs-de-sac. Valentin thinks that the pretended helicine arteries are nothing more than loops, the sides of which are concealed. I can only verify this method of observation: in the crest of a cock, completely injected, and in preparations treated with nitric acid of the strength of 1-10, in which the coagulated blood completely filled the vessels, I could see nothing but arteries very much convoluted, and terminating in a network of large capillaries, which, by their loops, crowded and interlaced with each other, appeared like vascular papillæ, and bristled the surface of the skin, become erectile.

The investigations which I have just mentioned, have conducted me to results conformable in almost every point to those which Valentin has recorded in his excellent memoir, where he demonstrates that the arterial diverticuli described by Müller under the name of helicine arteries, have only a purely artificial existence. I have, however, thought it useful to recapitulate them, with some details, for, in spite of its great precision, the work of Valentin has less reputation and authority than that of Müller, who nevertheless rests in the main upon an imperfect observation. Besides, Köbelt, and more recently still, Kölliker, have by their adhesion supported the opinion of Müller. The work of Valentin should be

rewritten or have been finished sooner. Valentin, in reality, has had the best reasons for stating as a fact, that there are not, in the corpora cavernosa, any more than in every other organ, arteries terminating in culs-de-sac, and that there, as everywhere else, these vessels convey the blood, which courses through them, to channels communicating with the veins. He has had reason, moreover, for stating that no artery opens freely into the centre of the areolar spaces of the spongy tissue; but—in asserting that the vessels convoluted into the form of a spiral do not owe this form to any other cause than the elastic contraction of a broken trabecule, that the arteries of erectile organs present no especial peculiarity, that the convolutions observed in them, as in most other parts of the system, are there, as elsewhere, calculated to accommodate them to a temporary distension—this eminent physiologist has left in doubt an actual fact which the work of Müller, in spite of the errors of interpretation which mar it, had notwithstanding very clearly set forth.

The arteries of erectile organs exhibit a peculiar arrangement, which is at once noticeable. In the first place, as Müller has pointed out, the arterial trunks, in the bulb and at the root of the corpora cavernosa, do not, as is ordinarily the case, divide into bifurcating branches, but are furnished throughout their whole extent with tufts of vessels which branch off in numbers, varying from 3 to 10, from one short common pedicle. These vessels do not, in a single instance, terminate in short diverticuli, they freely traverse the large sinuses of the central portion of the corpora cavernosa and the bulbs, and penetrate after multiplied divisions and anastomoses, into the muscular trabecules, accumulating especially at the surface; they run clear through them, and finally open at their surface by an orifice in the form of a wide slit; moreover, from their commencement to their termination in the muscular trabecules, the branches of these arterial tufts twist and roll themselves into spirals with a short compressed turn, interlace themselves with each other, mingle and anastomose, forming true vascular knots, which, entirely different from simple convolutions that a certain amount of distension will efface, remain entire during the most complete distension, and show a striking analogy to well marked plexuses. It is impossible to misapprehend the relation which connects this arrangement with the special function of an organ where the blood at a given moment must be accumulated as in a reservoir. The veins and the capillaries which are principally concerned in this, there accommodate themselves by dilations and innumerable anastomoses, and also, as has been so well demonstrated by Kobelt, in the corpus spongiosum of the urethra and in the glans, by well-defined true venous plexuses. The arteries, also, of erectile organs, attempt, after a fashion, to form distinct plexuses, the type of which, modified by more or less complex varieties, can be referred to a simple spiral twist.

Once in possession of this great fact, this mother idea, I was very quickly struck with the existence of arteries convoluted into spirals in most of the other organs of the generative system, about the membranous portion of the urethra, in the thickness of the prostate, among the vesiculæ seminales, in the epididymis and the testicle in man; and by a still more marked development, in the human female at the umbilicus of the ovary, in the parenchyma even of this organ, and most of all in the body of the uterus. In the majority of these organs, as in the prostate, the testicle, and the ovary, there was evidently reason for seeking an explanation of these vascular convolutions in the necessity of a temporary distension. In the uterus, these coils, which exist in virgins even, at the period of puberty, far from being eradicated by the development of this organ during gestation, are multiplied and increased in capacity. It was impossible, on the other hand, to misapprehend the fact that with these spiral convolutions of the arteries, there was always coincident the presence of finely divided plexuses, vast venous reservoirs, the plexus of Santorini, the prostatic plexus, that of the vesiculæ seminales, the pampiniform plexus of the testicle, and in the human female the pampiniform plexus of the ovary, and the uterine plexus and sinuses.

I had evidently under my eye the vascular elements of erectile formations, and to complete their demonstration nothing was wanting but the muscular trabecules enlacing in their network the vascular canals. As for the body of the uterus, it was not necessary there to search for the third element, since all the conditions essential for an erectile organ were found therein united; but it was nevertheless necessary to analyse their relations, to show that this mass of vessels was not that of an organ where the blood carried materials for nutrition only; to determine, by the distension of those vessels, the changes of form, of volume or of position; in a word, to ascertain the agents of the erection and the mechanism of this phenomenon. It is the solution of these different problems which I shall now treat of.

[To be continued.]

BRETONNEAU AND HUSBANDS' METHOD OF PRESERVING AND USING FLUID VACCINE LYMPH.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—I am induced, by the perusal of the very interesting letter from your correspondent "*Viator*," in the "*Journal*" for last week, to present to the notice of your readers a few remarks on the subject which forms the principal topic of that letter. In doing so, I partially anticipate a somewhat extended paper on the whole subject of vaccination which I hope to get time to complete during the ensuing winter, and for which, as many of

my professional friends are aware, I have been accumulating material for many years.

The method of preserving, in hermetically sealed tubes, vaccine lymph in a fluid state, originated with M. Bretonneau, of Tours, who has left us so many other claims to respect as a physician of the highest order and as a patient, exact observer. Bretonneau directed that tubes about six lines in length should be made, of capillary fineness at the extremities, but somewhat expanded toward the middle. These extremely minute tubuli were to be charged by holding one end between the finger and thumb, and applying the other successively to the little drops which exude from punctures in the vesicle. When filled, each end was to be touched with sealing wax; if only about a line of the tube was occupied by the lymph, it was to be hermetically sealed by touching the points to the edge of a strong flame, either of a blow-pipe or ordinary lamp, when, if properly made, the tube would be instantly closed by the fusion of the glass.

Subsequently these tubes were modified by being made of three or four times the length, the dilatation being in the form of a minute bulb (containing about a drop), midway between the extremities, and having, of course, a much greater proportion of tubing of capillary fineness.

There are two great objections to this method, which is, in the main, so beautifully ingenious and scientific. One is to the bulbous enlargement, and the other to the shortness of the tube. I first met the account of Bretonneau's method in one of the volumes of Velpeau's surgery, some ten years since, and at once procured to be made a number of tubes corresponding with the figures in that work. When I attempted to charge them, however, I found, although the lymph ascended to the bulb, that *there*, unless the enlargement was very slight, it stopped. Of course it was not difficult to account for this on familiar principles of physics. Some of the slightly dilated tubes, I, as before stated, succeeded in charging, and, not having faith in the hermetical virtues of sealing wax, attempted to close them by fusion of the ends, but found, when the points were applied to the flame, that, before the glass fused, the lymph got boiled, a process which, without further experiment, I was sufficiently satisfied would impair its anti-variola qualities. My tubes were too heavy; but a few among them, which were drawn of sufficient fineness, I succeeded in sealing, and used some of them afterwards with success.

From these experiments I became satisfied that the tubes should be very fine and of uniform calibre in order to be more amenable to the laws governing capillary attraction, and that their points might fuse with facility; and of greater length, that the lymph should, to a great extent, be remote from the destructive influence of heat during the sealing. I endeavored for some time to obtain longer and finer tubes, but not finding any artist who understood

the matter, and getting along very well with the ordinary methods of vaccination, I discontinued my experiments. During last summer, however, finding unprecedented difficulty (experienced, I believe, very generally in the neighborhood of Boston) in preserving lymph in an efficient state, I procured it from as many different sources as possible to lessen the chances of failure. At that time I received from New York the first long and uniform capillary tube that I had seen, or, indeed, never having known of Dr. Husband or his method, had even heard of. It was about four inches in length, about one-sixth part filled with lymph, and sealed with white wax. The fluid contained in this I used in several cases, not succeeding in any.

I now renewed my search for some one who could make such tubes as I deemed desirable, and was fortunate enough to find a person who drew them for me of exquisite delicacy, of from ten to fifteen and even twenty inches in length, and at a very moderate price. This tubing I break up into lengths of from two to four, five, and even six inches. If a vesicle when punctured exudes but a small quantity of virus, I apply to it the point of one of the short pieces which are broken from the thinnest and finest tubes; if a greater quantity can be obtained, I use pieces of proportionally greater length.

I have found no difficulty in sealing them at the flame of the lamps in common use at my patients' houses. In charging a tube, it will be found that the end held between the finger and thumb is not quite filled; the end which is filled should be gradually brought to the edge of the flame. When this is done, it will be noticed that the lymph is driven towards the other end, partially filling the vacancy; the flame should be now *barely* entered, and in an instant the glass fuses and the sealing of that end is accomplished. The other should be treated with the same caution, for if too great a portion enters the flame, a part of the fluid becomes vaporized and blows at the fused end a succession of minute bubbles, or there may result one of those infinitesimal explosions alluded to in *Viator's* letter. When charged, I put them away in a box filled with powdered charcoal, in a cool, dry, dark place. I do not suppose that the charcoal is of much consequence, but it is part of the original method of Bretonneau, and I have sufficient respect in *such* authority to follow it in so trifling a matter without question. These little tubes can be sent by mail or otherwise with perfect safety, and in any quantity in quills filled with bran, or fine saw-dust, and sealed with sealing wax.

The manner in which I have used the lymph thus preserved, is to break off each end, insert one point into a small straw or roll of paper, blow the contents out upon the surface of a perfectly clean piece of window glass, use the lymph in a fluid state for any vaccinations which are to be presently made, and if any remains charge therewith as many quills as may be. I have succeeded very

well in this way, and do not think that Dr. Husband's method of blowing the lymph upon the scratched arm has any advantage over it. Bretonneau's plan was the same, except that he moistened the points of lancets with the lymph.

I quote still another method from a pamphlet issued in New York. "Fluid lymph is best used by first breaking the tube at the point to which the fluid ascended in charging, and then drawing the fractured end through or over the incision made by the vaccinating scarificator." No directions are given to ascertain the end to which the lymph ascended. It does not seem of much consequence which mode is adopted, but I wish to give your readers such information as I may possess on a matter which, at present, may perhaps be of peculiar interest. In regard to the vaccinating scarificator, it may be obtained from Tieman, of New York, at a cost of three and a half dollars. It is essentially a miniature cupping scarificator, and is one of those useless gimcracks of which surgical genius seems so prolific; it is infinitely difficult to keep the little blades free from rust, and every vaccinator knows, or ought to know, the impropriety of using rusty instruments. The slight scratches are made infinitely better with the "not over sharp point of a lancet." If either the punctures or scratches are properly made (that is, so slight that they barely exude blood, or rather serum tinged with blood, and *that* only after rubbing the arm with one's finger), it will be quite unnecessary to do anything more than simply apply the fluid lymph thereto—no dabbing, or pressing, or other manipulation, is necessary.

As I never heard even Dr. Husband's name or any account of his method of vaccination, before reading your correspondent's letter, I, of course, do not know whether he claims the method of scratching instead of puncturing the arm as his own, or for how long a period he has employed it; but I have vaccinated in no other way for at least nine years, when using fluid lymph or the dissolved crust; and having been struck by its great advantages over every other method in its freedom from pain and the accompanying soreness of the patient, and in its greater certainty on account of the vast number of points at which the virus is brought into contact with the absorbents, I, three or four years since, read a paper before our County Society, in which I urged this and some other matters upon the attention of its members, and I believe that to some extent they have adopted the method.

When I commenced vaccinating in this way, I supposed it was original with me; but I have since ascertained that other physicians in this neighborhood have used it, among them the respected ex-president of our Society, Dr. Elisha Huntington, of Lowell, long before myself.

I trust that your readers will pardon the doubtless many inelegancies of this hastily written communication, begotten truly "twixt sleep and wake," and "*inter tædia et labores*," if that stands

for during attendance on a "tedious labor," and long after midnight, in the "wee hours about the twal." I hope those who may read it will derive some useful information from the matter, to compensate for the deficiencies in the style.

The ingenious and very obliging artist who prepared the tubes, so often mentioned, is Mr. Huddleston, scientific instrument maker, 96 Washington street, up stairs. I have obtained a quantity, and left them for gratuitous distribution at Messrs. T. Metcalf & Co.'s, who have very kindly consented to deliver specimens to whoever may think it worth while to call for them. If any desire a larger supply, I am informed that Mr. Huddleston will be happy to prepare them in any quantity and at a moderate price. Whether it is expedient, as I believe it is by some considered, to import vaccine lymph from Britain, notwithstanding our millions of kine and babies, I think it will be acknowledged by those who see Mr. Huddleston's tubes, that, for them, at least, it is not necessary to send across the broad Atlantic.

Yours respectfully,

Roxbury, Nov. 30th, 1859.

HENRY A. MARTIN.

CHLOROFORM IN MIDWIFERY.

[Communicated for the Boston Medical and Surgical Journal.]

THE use of anæsthetics in all cases of normal labor, is now generally and wisely discarded. In some abnormal conditions, the judicious use of chloroform is attended with the happiest results, which entitle it to take precedence of all other agents. From its speedy action it is preferable to ether, as, in general, the object is to afford immediate relief on the accession of a pain, and not to produce unconsciousness. From its specific effect, in promoting uterine and vaginal secretions, in correcting irregular uterine contractions, and in relaxing the mouth of the uterus, it supersedes the use of tartarized antimony, opium and venesection, while its action is far more agreeable to the patient, and more under the control of the physician. A case occurred in the first labor of a young woman, where the three last named agents were used without relieving the ineffectual, yet almost intolerable, pains, while the subsequent inhalation of chloroform reconciled all difficulties, like a charm, without using it to the extent to cause sleep.

In the contraction of the upper circle of the os uteri, described by Dewees under the head of "partial contractions of the uterus," chloroform is the remedy. In illustration, the following case is given. The patient was a robust Irish woman who had had several children, one of which, she said, weighed nineteen pounds at birth. There was certainly no want of capacity in the pelvis. When called to her, she had been in labor twelve hours, with smart pains. The membranes presented at the os externum, and were soon ruptured. The os uteri was fully dilated, and the presenta-

tion was natural, but the head did not advance. The finger, interposed between the head of the child and the lip of the uterus, detected an apparent lack of expulsive power. Ergot was given, which only made the pains more continued. The introduction of the hand, within the os uteri, disclosed a contraction of the uterus around the neck of the child, which prevented the shoulders from passing. Tincture of opium with tartrate of antimony were then given, which caused vomiting, but no favorable change. Venesection, so relied upon by Dr. Dewees, was not deemed expedient, as the patient was addicted to the free use of stimulants. Seven hours of attendance had already passed, and another hour elapsed in procuring some chloroform. A small quantity of this was inhaled, from a handkerchief, at each pain, producing a happy frame of mind, and an occasional sleep between the pains. In half an hour from the commencement of its use, the spell was broken, and the labor soon terminated in the birth of a child weighing ten and a half pounds.

This was, really, an "hour-glass" contraction; therefore, analogically, chloroform is the remedy in "encysted placenta," and will supersede the necessity of physical force. It is a precious boon to suffering woman, which no humane physician, with a knowledge of its power and applicability, should wish to withhold.

EZRA BARTLETT, M.D.

Exeter, N. H., December, 1859.

Correspondence.

34 Gloucester Place, Hyde Park, }
London (W.), Nov. 5th, 1859. }

MESSESS. EDITORS.—Although I begin this communication on Guy Fawkes's day, and with perpetual reminders of the anniversary in the shape of groups of boys surrounding their fantastic "Guys," and singing before the windows a wild chorus, sure to be terminated by "remember the Guy, please"!—I by no means intend to perpetrate a Gunpowder Plot at the expense of the JOURNAL. If, therefore, you find any thing in what is to follow, which in your own opinion will tend to blow up that respectable periodical, you must suppress it; and you can, if you please, comment upon its author in the expressive phrase—"What a Guy!"

Being about to leave this wonderful wilderness of a city, I have thought a few hasty notes of what I have seen here professionally, might not be unacceptable to you. I have exemplified "perpetual motion," in my own person, for some time past, by rushing from one part to another of this immense emporium, in search of medical and surgical celebrities, either at their residences, at hospitals or dispensaries. In several instances, introductory notes from professional friends at home have procured for me not only the information which I sought upon medical and surgical subjects, but also those pleasant hospitalities which a stranger so fully appreciates. There are many

among us in Boston who will mentally unite with me while I acknowledge with peculiar gratification the hearty cordiality and genial attention shown by medical men here to their *confrères* from our side of the water. A very pleasant social feature of this intercourse is the reunion of one or two congenial persons at breakfast. An English breakfast is a very delightful thing, *per se*, but the pleasant conversation upon various topics, and the true and easy courtesy shown to the guests, have made a lasting impression upon me. I have but just returned from such a breakfast with Mr. J. P. Streatfeild, the accomplished editor of the Ophthalmic Journal, published here under the auspices of the medical officers of the Royal Ophthalmic Hospital, Moorfields, and with which you have been now some time familiar. Mr. Streatfeild, although quite a young man, is rapidly rising to a most enviable position, both as a practical ophthalmic surgeon and as a *littérateur* in professional matters generally. Of the excellent management of his own Journal, I need not now speak, since the readers of the Boston Medical and Surgical Journal have seen it frequently commented upon. It ought to be universally patronized. Mr. S. is no less a delightful companion and good host, than a man of note professionally. The Latin salutation "*Salve*," which is inwoven into his *door-mat*, and which therefore strikes the visitor's eye the moment he enters the door-way, only forestalls for an instant the landlord's spoken greeting. Mr. S. jocosely begged me to remember—on my remarking the above—that it was *not* intended to refer to *salce*—of any sort!

I should be dissatisfied with myself, were I to omit mentioning an equally delightful morning passed with Dr. Francis Sibson, whose exquisite taste in matters relating to Natural History is, I am sure, as familiar to some of our brethren in Boston, as his medical fame is widely known and appreciated. I hope it is not inappropriate for me to refer, in this connection, to that sympathy of taste in matters relating to Art and Natural Science, which so gracefully manifests itself between the master and mistress of the hospitable mansion to which I now refer. May the hues of happiness and prosperity which now pervade the existence of both, be unlike the shifting colors of the pet-chameleon, so much at home upon the lady's hand!

To Dr. George Johnson, the well-known author of the work on the kidneys, so long acknowledged as standard authority, I am greatly indebted for the pleasure and advantage derived from an examination of his beautiful and extensive collection of microscopic specimens of renal pathology. To a singularly kind and winning manner, Dr. J. adds a clearness of description and a skill in manipulation, which at once make his visitor "*at home*," and enable him to grasp and retain much in a comparatively short time. Approaching him without any introduction, except by acknowledging my indebtedness to his invaluable work, for my own purposes of quotation, I was received with the utmost kindness, and would express my deep obligation to him for his polite attention. The specimens examined under Dr. J.'s microscope, were his exquisite preparations of appearances in various forms of renal disease.

At St. Mary's Hospital, Paddington—an institution comparatively new, of great merit, well-built and admirably ventilated—I was so fortunate as to see the practice of Dr. Sibson and of Mr. Toynbee. The latter gentleman is Aural Surgeon to the establishment, and of

him, and others distinguished in this branch, I intend to write you on another occasion—having particularly interested myself in this department, while here this time.

With Dr. Sibson, I saw many interesting cases, and was as much pleased with his gentle and urbane deportment toward his patients, as I was with his demeanor in his own house. He has devoted a great deal of time, labor and expense, as is well known, to the investigation of thoracic disease; and his researches in chest-measurement in pulmonary pathological conditions, are widely known and valued. I had the advantage of examining many of the plates and illustrations already published by Dr. S., besides others not yet made public; and I was much gratified by witnessing the application of his little instrument known as the "chest measurer," a model of which was shown, some time since, by Dr. Putnam, at a meeting of the Boston Society for Medical Improvement. The instrument appears to me to constitute a measure both of the rapidity of respiration and of the capacity of the lungs—also of the power of inflation—as when respiration is hindered from any cause, as in pleuritic disease, &c.

The wards around which I accompanied Dr. Sibson, when visiting St. Mary's, were named Victoria, and Albert. The former contains 21 beds, the latter 18. There are 150 beds in the hospital, usually prepared for use; and extra beds are often set up. I have thought it a pity that this and other similarly well-managed and useful institutions do not receive governmental aid. They appeal, very generally, to public charity, although the names of the titled and the wealthy appear duly registered as their "Patrons." It has not yet happened to them, apparently, to be effectually remembered in testamentary documents, like our own Massachusetts General Hospital, for instance. Some two or three hospitals do receive the royal aid.

I was greatly interested by the account I received from Dr. Sibson, of the unexpected convalescence of a man in his wards, who entered very seriously ill, and in imminent danger of suffocation from the effect of pressure of an enlarged thyroid gland upon the trachea. The hissing, whistling respiration of this patient could be heard for a long distance from the bed when he first came in, and it was thought he could not survive. Diligent watching and treatment, however, brought him round, so that when I saw him he was convalescent, although much of the *sibilus* in respiration was still audible. By the chest-measurer, it was ascertained that where the respiration had been twenty and more, on admission, it had fallen to four and five. Amongst other remedies, Dr. S. had given six grains of iodide of potassium every hour, during the height of the affection.

In delirium tremens, Dr. Sibson has found great success by administering opium in full doses, *at night only*, stopping in the day time. Some stimuli are occasionally needed, in certain cases. As for abandoning the use of opium, as has been advocated by some in this affection, Dr. S. scouted the idea—but he rigidly observes the above-named rule of administration. He prefers the fluid forms of preparation for giving the drug.

At University College Hospital I saw the operation for lithotrity skilfully performed by Mr. Erichsen, who was also particularly attentive in pointing out to me the interesting cases in his extensive wards. Amongst others, a good case of restoration of soundness to the shaft of the right humerus, by the "peg-operation," after long un-united

fracture; and an excellent result, in a boy, after exsection of the head of the femur, particularly interested me. Mr. Erichsen also showed me a new disinfecting agent, which is used in the hospitals and dispensaries, as well as in private practice, here—it is entitled "Condy's Patent Disinfectant," and is understood to owe its virtue to the *permanganate of potash*. The solution, when mingled with water, is of a beautiful purple or violet hue.

I must here take the opportunity to express my admiration of Mr. Erichsen's bearing, both toward his patients, and toward those who follow his clinical visits. Firm, resolute, and very dexterous as an operator, he is polite, communicative, and the soul of good humor. In his own house, I enjoyed a most cordial welcome from him, and have gratefully to acknowledge being put in the way, by him, of acquiring much information, from the best sources, upon the Diseases of the Ear. I could not but be struck with the resemblance between Mr. E. and Dr. L. M. Sargent, Jr., of Boston—and, if I mistake not, much of the same humor and bonhomie which we know to characterize our townsman, belongs also to Mr. Erichsen. I shall ever retain the most agreeable impression of the English surgeon. His opinions upon lithotrity and lithotomy, as enunciated in a clinical lecture to which I listened, are worth mentioning. He considers the mortality after lithotrity to be as great as after lithotomy, in University College Hospital. For lithotomy, he greatly prefers the *lateral* operation; and he counsels operators to perform it *low down*—getting into the triangular space, formed by the perineal muscles, from below upward and opening the urethra far back. Thus wounding of its bulb is avoided.

I may here mention that an intelligent-looking negro was acting as one of Mr. Erichsen's dressers.

In ophthalmic surgery, I have been fortunate in witnessing the treatment usually adopted at the Royal London Ophthalmic Hospital. In treating that very common affection amongst the lower classes—granular conjunctiva—and of which we have such innumerable instances at the Central Office of the Boston Dispensary—the surgeons of the Ophthalmic Hospital employ the sulphate of copper crayon, as we do—and the constitutional measures requisite, are, as with us, strictly observed. Tonics, and especially ferro-iodides, are much in favor—for, as with us, the lymphatic and scrofulous diatheses often prevail.—There is a vast crowd of out-patients at the "Ophthalmic;" and the untiring services of the physicians and surgeons are unfailingly enlisted. Mr. Streatfeild informed me that it is intended, shortly, to build, and furnish suitable accommodations for this admirable charity. Here is another object, to which, as I before intimated, the aid of government should be lent.

At the "Ophthalmic," I saw Mr. Dixon—well known as a most judicious and skilful operator—perform the operation for extirpation of the globe of the right eye. The patient was a young, weakly-looking boy. Chloroform was used. Before operating, Mr. Dixon said that he believed the affection to be encephaloid disease of the globe. The usual operation for extirpation was dexterously performed. After removal of the eye, a bulging portion was plainly perceptible, close to the optic nerve—which latter, although not deeply diseased, seemed gelatiniform in consistence. The protruding part mentioned, Mr. Dixon considered without doubt to be an *encephaloid* growth, affecting the whole interior of the tissues of the globe. In a case of extreme

staphyloma corneæ, under Mr. Streatfeild's care, that gentleman had thought of extraction of the lens, as a last measure, to relieve a very bad condition; Mr. Dixon advised delay for a time. The patient was a Morocco Jew, in rather poor health and much depressed in spirits. He was not, moreover, very clean in person—as both hair and beard exhibited ample accommodation for that species of minute vermin said to be particularly friendly to man. The diseased eye in question was the left; the right had been previously operated upon, by Mr. Streatfeild, for artificial pupil.

Mr. Dixon is partial to the operation for cataract by *extraction*, and showed me two patients upon whom he had lately done the operation, with very satisfactory results. The operation of breaking up a very soft lenticular cataract, with the needle, I saw very skilfully performed by Mr. Streatfeild.

At the Ophthalmic Hospital, I also had the great pleasure and satisfaction of meeting with Mr. Jonathan Hutchinson, so widely known to the medical world as a zealous and most skilful practitioner, and moreover as an original thinker, of the very first water. I was delighted with my interview with Mr. H., and, in the short time I was in his company, had the advantage of witnessing, under his own guidance and explanation, a very marked case of that peculiar condition of the teeth, which he has lately discovered; viz., a notched and often an inverted (sideways) state—best illustrated by engravings—and which is pathognomonic of hereditary syphilis. Great credit deservedly redounds to Mr. H. for his acuteness in making this discovery, and his industry in elaborating the facts. A most interesting account, with capital illustrations of the lesion, has just appeared in the tenth volume of The Pathological Society's Transactions. Mr. Hutchinson very kindly promised me certain of his illustrations upon this subject, and which I hope to be able to show on my return. The whole matter is novel, exceedingly interesting, and most valuable to the profession and the public generally. I am very much gratified to have enjoyed so excellent an opportunity of witnessing this peculiar condition, and shall be much interested in making observations thereupon, at home. I am glad to have the chance, also, of letting the profession in America know that the publications of "The New Sydenham Society" for the first year, will be furnished to subscribers in the United States. This, it had been feared, would not be possible; but Mr. Hutchinson, the Secretary of the society, told me, the other day, that a reprint of the copies is to be issued, and that subscribers in the States will probably receive their copies sometime in January next. As I saw a statement of a different nature in the JOURNAL, a while ago, I take pains to mention this. Possibly Dr. Salter, local Secretary at Boston, may have forestalled me in giving this information.

In conversation with Mr. Hutchinson, relative to "Addison's disease"—he having, as is well known, made an admirable *résumé*, of the cases known, up to a late period (Vide *Medical Times and Gazette*)—he now confirms the conclusions of Dr. Addison and of himself and some others—being confident of the close connection existing between disease of the supra-renal capsules and bronzing of the skin. He spoke of instances, and of one in particular, where a diseased condition of the capsules had been confidently predicted during life—bronzed skin existing—and the fact was verified on dissection.

I have already mentioned the fact that great numbers of out-patients

attend at the Ophthalmic Hospital; Mr. Hutchinson's expression was, that the attending surgeons were literally "inundated."

I believe that I have thus given you enough for once, in the shape of so excursive a communication as this letter is; and as I have already intimated an intention of furnishing you with some of my notes upon diseases of the ear, at another time, I will now take my leave, with best wishes for yourself and the JOURNAL. My method of writing has been more rapid than my observations were—resembling very closely the action of a "Patent Safety Hansom Cab"—riding in one of which vehicles, as I dare say you know, is capital fun and very exhilarating. Considering the crowded state of the streets of London, and the rapid rate of driving, the Hansom "cabbies" may be said to do the thing *handsomely*! And nearly an equal award of praise may be adjudged to men of the whip, here, generally.

Yours very truly,

VIATOR.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, DECEMBER 8, 1859.

IS CHLORATE OF POTASH AN INNOCENT REMEDY?—The *Lancet* for Oct. 8th contains a communication from Dr. HENRY OSBORN on the subject of Chlorate of Potash, in which he intimates that this salt is not quite so safe, when indiscriminately administered, as is generally imagined. He thinks that congestion of the brain is apt to follow its use. He took it, himself, in the doses of five, ten, and fifteen grains. The first two doses caused a sense of congestion in the head, with pain in the forehead. The last dose produced "slight acceleration of spirits, followed by congestion of the brain to such an extent that one-half the head, face and nose felt paralyzed. These symptoms continued for two days, and then gradually subsided. There was also a loss of taste, being scarcely able to distinguish different kinds of meat. The muscles of the palate felt contracted, and the mucous membrane of the mouth and throat appeared tanned, as if this had been effected by tannic acid." We call attention to these statements, although we cannot help thinking that Dr. Osborn is mistaken in his inferences. The medicine is given almost daily in doses of from ten to thirty grains, and upward, without such effects as he describes being observed, as we think they certainly would, did they often occur.

Since the above was written, we have seen a communication from Mr. WEEDEN COOKE, in answer to Dr. Osborn, from which we copy the following passage:—"In my hands chlorate of potash has proved a tonic of the very highest value in all adynamic conditions, and at all ages; but more especially in hectic states of the system, when quinine and iron were inadmissible. So powerful is it in oxidizing, or decarbonizing the blood, when the liver and skin have failed in their offices, that I believe, from a very large experience of its effects at the Royal Free Hospital, that there is no tonic comparable to it in the sequelæ of the exanthemata (otorrhœa, anasarca and cachexia of all kinds), in all scrofulous diseases, whether of bone, gland or tissue, as well as

those indicated by Dr. Osborn—viz., necrosis, leucorrhœa, gleet, and secondary syphilis. Agreeing with Dr. Osborn in the inexpediency of its administration in all acute inflammatory attacks, I think that in reviewing those numerous diseases in which there is want of power, I know of none in which chlorate of potash, either solely or in combination with iron, quinine, or the other vegetable tonics, may not be advantageously employed." He gives it to a child of one year, in the dose of one grain, increasing it one grain every year until seven years; after that, a more gradual increase, until eighteen years, when the full dose, fifteen grains, may be employed.

Mr. Cooke considers the chlorate of potash as remarkably efficacious as a local application in various ulcers. "It is invaluable in foul chronic ulcers of the legs: in tertiary sores, not of an inflammatory character: in ulcers of the mouth and tongue, arising either from syphilis or cancer, or cancrum oris, or necrosis of the jaws; and especially so in cleansing and deodorizing, and indeed healing many of the foul cancerous ulcers occurring in various parts of the body. I have employed it in all these lesions at the Cancer and the Royal Free Hospitals, as well as in private practice, for many years, and am daily reminded of its inestimable benefit, wherever there is an absence of active inflammation." The strength of the solution which he employs is eight grains to the ounce of water. This, however, is too strong for the mouth, and generally for the breast.

SMALLPOX AND VACCINATION.—The prevalence of smallpox and varioloid, during the past six months, not only in this community but in other parts of the country, and even in Europe, has awakened a good deal of discussion on the subject among medical men. The foreign journals are teeming with articles on the best method of performing vaccination, so as to prevent the danger of subsequent infection, and on the most efficient means of encouraging the practice among an ignorant and prejudiced class of people, too often indifferent to, if they do not actually resist the inestimable blessing of a means of preventing a most dangerous and loathsome disease. Even in England, where more stringent measures are adopted than are possible under a government like ours, vaccination is far from being as universal and as efficient as it ought to be. Hence, from time to time epidemics break out, which destroy a greater or smaller number of inhabitants, until the material, the unvaccinated part of the community, is exhausted.

More attention seems to have been paid of late to the selection of good lymph, or rather of lymph taken from healthy subjects, than was formerly thought necessary. How far this is a matter of importance, is still a matter of doubt. There are some high authorities who maintain that it is impossible to transmit other diseases than the vaccine, by means of vaccine lymph; but the more general opinion among those who are qualified to judge in this matter, is that a syphilitic taint may be so propagated, and probably other diseases and even diatheses. Thus Dr. James Whitehead, of Manchester, a most reliable observer, states, in the Third Report of the Manchester Clinical Hospital, that in 34 cases occurring in that institution, the evidence appeared sufficiently convincing to warrant the belief that a taint had been communicated; and in 14 of these, the disease thus implanted was of true syphilitic character, as the nature of the symptoms and the mode of its derivation convincingly demonstrated. In 20 other

cases, whose history was less clear, the symptoms in the child were so precisely like those of constitutional syphilis, and so unlike, in several of their features, any other form of disease, that the treatment employed was that commonly used in syphilitic disease, and in most of the cases was attended with satisfactory results. In all these cases, the parents and the rest of their children were found, after careful inquiry, to be free from such affections. However this may be, the present difficulty lies less in procuring good lymph than in arousing people from their apathy before it is too late. The poorer classes are not only much more suspicious than the rich as to the quality of the "infection," but are often jealous of being vaccinated at all.

It is a little remarkable that the operation of vaccination, the greatest blessing which medicine has conferred on man, should be comparatively unremunerative to the physician. Many persons would pay for a physician's attendance through a case of smallpox with more readiness than they would pay for vaccination, by which the expense of such attendance might be saved. The operation looks so easy—any one might do it—that it really is not worth anything! One is apt to forget that it is impossible to assign the exact commercial value to any of the services which the physician renders to his patient. Vaccination is as easy as writing a prescription; but to do it well, to be able to select the lymph from a healthy source, and to judge of the character of the vesicle produced, form a part of the results of a laborious and expensive course of study, which no one undertakes without the prospect of a reasonable pecuniary return. No physician would refuse to vaccinate a person exposed to variolous contagion because the latter was unable to pay, but it is notorious that the fee generally received is not only disproportionate to the benefit conferred, but to the circumstances of the patient. We believe it would average less than a dollar, and if we include in the average those cases in which the operation is gratuitously performed, it would be much less. We do not expect to have our property insured from destruction without paying a reasonable compensation; is it not unjust to effect an insurance against disease and death, without paying for it? If a reasonable fee for vaccination could be collected, it would be much more for the interest of physicians to perform the operation than it now is; but it cannot be reasonably expected that they should go out of their way to do it, when they have already so much other gratuitous labor to perform.

We notice in a daily paper a statement to the effect that the virus used for vaccination has never been renewed since the time of Jenner. This is incorrect. The virus has been repeatedly renewed, though we believe there is no reason to think that the original stock has in any way deteriorated.

A NEW METHOD OF APPLYING CHLORIDE OF ZINC.—The following formula is recommended by Dr. G. W. SPENCE, of England, for a chloride of zinc paste. Dissolve fifty grains of prepared chalk in two drachms (by measure) of commercial muriatic acid; dissolve one hundred and fifty grains of sulphate of zinc in two fluid drachms of boiling water. When required for use, mix the two solutions, and the result will be a paste weighing near an ounce, and containing about one-sixth of pure chloride of zinc.—*Lond. Lancet.*

POPULAR NOTIONS RESPECTING THE MEDICINAL PROPERTIES OF GIN.—Within a few years past it has become customary to prescribe alcohol in various forms, for certain diseases, particularly tubercular consumption; and this substance is also given in the form of wine, in other complaints, to a much greater extent of late, than was thought advisable during a few years past, owing doubtless to the natural reaction which followed the ultra-temperance doctrines. We have no question of the beneficial effects of alcohol in certain diseases, when administered at the proper time and in the proper quantity; which can only be decided by a medical man; but we have before protested against its indiscriminate employment without medical advice, as being in a great measure useless for purposes of cure, and often dangerous in its effects both on the disease and on the habits of the patient. There is no doubt that a large amount of whiskey (and pretty bad whiskey, too) is consumed under the excuse of sickness, which is really taken in order to gratify a craving for ardent spirit. Of course the manufacturers and sellers of spirits lose no opportunity of urging upon the public the value of alcohol as a remedy for innumerable diseases, and they expend large sums of money for advertising their liquors, and for printing certificates from chemists, clergymen and obscure doctors in favor of their efficacy.

All this is natural, and we should never dream of uttering our feeble voice against a monstrous but inevitable evil. We cannot forbear, however, once more to protest against the reprehensible proceeding of certain newspaper editors, who prostitute their influence by endorsing the statements of those who advertise in their journals, and thus tend to increase the evil of intemperance, which has been the source of more misery to the human race than any thing else. The whiskey mania has of late yielded a little to the gin fever. Our papers are filled with advertisements stretching from top to bottom, each party recommending his own gin, as the only pure and unadulterated article; and however much they may dispute about the superiority of their different articles, they are all agreed on one point,—there is nothing like gin for a great variety of complaints, but, above all, for all diseases of the kidneys and of the bladder. These recommendations are echoed by the editor, who, as in the case of an article before us, says "it is well known that in all cases of the diseases of the kidneys, pure gin is not only the best possible agent to work a cure, but that at the same time it acts with equal benefit as a preventive. The peculiar properties of gin act most powerfully upon the kidneys, gently assisting the operations of nature, so as to prevent the formation of calculi. These diseases cause untold suffering, but are most effectually overcome by the use of this simple remedy." These statements are entirely untrue. Gin is rarely given in diseases of the kidney. It is a good diuretic which is occasionally useful in diseases of other organs, when the kidneys are sound, and will bear stimulating. Of course, when the kidneys are diseased, the indication is to throw their work on some other organ, especially the skin.

But if gin be of very limited use in the treatment of disease, it is a most frequent cause of disease, especially of the liver and kidneys. Cirrhosis is caused, in a large number of instances, by the habitual use of gin, and hence the prevalence of that disease in London, where this spirit is extensively drunk by the lower classes. Indeed the amount of evil caused by gin-drinking in London is incalculable. It is

certainly unfortunate that not only should its use be recommended here, but that virtues should be ascribed to it, by those whom the public is accustomed to look upon as respectable authorities, which it is entirely destitute of. The use of gin is by no means confined, particularly, to the treatment of urinary disorders. It is given by the ignorant for every variety of complaint, even to young infants. It is time that the public should be disabused of their notions respecting the effects of this fascinating medicine. We are not believers in total abstinence, but the occasions for the necessary or even useful employment of gin are comparatively few, while its habitual use, in excess, lays the foundation for serious, and often incurable diseases.

MAINE MEDICAL SCHOOL.—*Messrs. Editors*,—Your correspondent "Medicus" chats quite merrily over the misrecollection and misuse of the name of an individual in my article published in your JOURNAL of the 13th of October. In palliation of that fault, allow me now to re-baptize the child, and to name him correctly, Paul A. Chadbourne. There—the matter is all right; and yet a rose by any other name would smell as sweet—yea, even by the funny name of Chadwick.

And now, Messrs. Editors, would you have the goodness to publish in your Journal the act of the Legislature of Maine, granting to the Maine Medical School half a township of land, your many intelligent readers would have the opportunity of seeing and judging the conditions imposed by that act, and upon whom imposed; and whether or not the acceptance of it by the Trustees of Bowdoin College places the Medical Faculty under the authority of law in the case made and provided—meaning, the education, studies, and graduation of the medical students at that institution, anything contained in the announcement of the Medical Faculty for the year 1860 to the contrary notwithstanding.

HUFELAND.

Nov. 28th, 1859.

HEALTH OF THE CITY.—Of the 72 deaths reported the past week, those of females were ten in excess over those of males. The number under 5 years was 20, exactly the same as that between 20 and 40. The number of deaths of females by consumption was 16, and of males 5. The victims to smallpox were 2 males, aged 21 months and 25 years; and 3 females, aged 4, 30 and 53 years. The deaths by old age were of one male aged 90, and one female aged 87. The deaths formerly classed under "infantile diseases" are now included under the head of "unknown," which in the present report includes 4 of the former. The total number of deaths for the corresponding week of 1858 was 82, of which 18 were from consumption, 5 from pneumonia, 6 unknown (infantile diseases), 5 from casualties, 3 from scarlatina, 1 from old age, 3 from puerperal disease, 0 from smallpox.

Errata.—Page 318, second line, for "or" read *as*. Page 335, nineteenth line, omit the words "more sonorous."—P. 377, line 35, for "soreness" read *screams*.—P. 378, 2d line, for "about" read *against*.

Books and Pamphlets Received.—The Diagnosis, Pathology and Treatment of the Diseases of the Chest. By W. W. Gerhard, M.D. Fourth Edition.—The Obstetric Catechism, containing two thousand three hundred and forty-seven Questions and Answers on Obstetrics Proper. By Joseph Warrington, M.D. Records of Daily Practice. A Scientific Visiting List for Physicians and Surgeons.

Deaths in Boston for the week ending Saturday noon, December 3d, 73. Males, 31—Females, 41.—Accidents, 4—apoplexy, 1—bronchitis, 1—congestion of the brain, 2—disease of the brain (scrofulous meningitis), 1—consumption, 21—croup, 1—dysentery, 2—dropsy, 3—debility, 2—puerperal disease, 3—scarlet fever, 3—typhoid fever, 2—gastritis, 2—disease of the heart, 2—intemperance, 1—disease of the kidneys (Bright's disease), 1—inflammation of the lungs, 1—marasmus, 1—old age, 2—pleurisy, 1—premature birth, 3—smallpox, 5—sore throat, 1—thrush, 1—unknown, 5.

Under 5 years, 20—between 5 and 20 years, 9—between 20 and 40 years, 20—between 40 and 60 years, 11—above 60 years, 12. Born in the United States, 40—Ireland, 26—other places, 6.